

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application Number : 10/725,488 Confirmation No.: 3974  
Applicant : Mark ZOLLER  
Filed : December 3, 2003  
Title : FUNCTIONAL ASSAYS FOR IDENTIFYING COMPOUNDS  
THAT MODULATE T1R1/T1R3 (UMAMI) TASTE  
TC/Art Unit : 1647  
Examiner: : Robert S. Landsman  
  
Docket No. : 67824.407427  
Customer No. : 21967

**MAIL STOP AMENDMENT**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, and in compliance with the duty of disclosure set forth in 37 C.F.R. § 1.56, applicants submit attached Form PTO-SB/08B (modified) for consideration and request the references cited therein be made of record by the U.S. Patent and Trademark Office in the above-captioned application.

Applicants respectfully point out that the submission of the listed references in this Information Disclosure Statement is not an admission that they are prior art or that they are material to patentability of any claims of the application. Also, the submission of this Information Disclosure Statement is not an indication that a search has been made by Applicants.

For the convenience of the Examiner in considering the cited references, a copy of each of the cited references is enclosed with this communication. In considering the cited references, it may be noted by the Examiner that certain of the references may contain markings, underlinings, and/or other notations. These markings, underlinings, and/or other notations are not to be construed as drawing the Examiner's attention either to selected parts or away from other parts of the cited references. Any such markings were either present on the copies of the cited

references obtained by the associated individuals, or were made thereon during the study of the references by the associated individuals.

As this application was filed after June 30, 2003, copies of U.S. patents and/or U.S. patent application publications under 35 U.S.C. 371 cited on the attached Form PTO-SB/08 (modified), are not being provided as specified in 1276 *O.G.* 55 (5 August 2003).

Consideration of the foregoing plus the prompt return of a copy of the enclosed Form SB/08B with the Examiner's initials in the left column in accordance with MPEP 609 are respectfully requested.

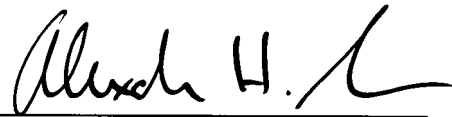
In accordance with 37 C.F.R. § 1.97(b), this Information Disclosure Statement is believed to be submitted prior to issuance of a first Office Action after the filing of a Request for Continued Examination under 37 C.F.R. § 1.114. Therefore, it is respectfully submitted that no fee is required for consideration of this information. However, in the event any fee is deemed necessary, the Commissioner is authorized to charge the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

HUNTON & WILLIAMS LLP

Dated: April 25, 2007

By:



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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT***(use as many sheets as necessary)*

<b>Application Number</b>	<b>10/725,488</b>
<b>Filing Date</b>	<b>December 3, 2003</b>
<b>First Named Inventor</b>	<b>Mark ZOLLER</b>
<b>Art Unit</b>	<b>1647</b>
<b>Examiner Name</b>	<b>Robert S. Landsman</b>
<b>Attorney Docket Number</b>	<b>67824.407427</b>

**Sheet** 1 of 4**U.S. PATENT DOCUMENTS**

*Examiner Initials	Cite No.	DOCUMENT NUMBER Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	US- 6,383,778	05-07-2002	Zuker, et al.	
	2.	US- 5,993,778	11-30-1999	Firestein, et al.	
	3.	US- 2003/0054448	03-20-2003	Adler, et al.	
	4.	US- 2003/0040045	02-27-2003	Zuker, et al.	
	5.	US- 2003/0022278	01-30-2003	Zuker, et al.	
	6.	US- 2003/0022288	01-30-2003	Zuker, et al.	
	7.	US- 2002/0168635	11-14-2002	Zuker, et al.	
	8.	US- 2003/0008344	01-09-2003	Adler, et al.	
	9.	US- 2002/0160424	10-31-2002	Adler, et al.	
	10.	US- 2002/0151052	10-17-2002	Chaudhari, et al.	
	11.	US- 2002/0094551	07-18-2002	Adler, et al.	
	12.	US- 2002/0051997	05-02-2002	Zuker, et al.	
	13.	US- 6,540,978	04-01-2003	Margolskee, et al.	
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EXAMINER SIGNATURE

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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449/PTO  <div style="text-align: center;"> <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i> </div>		<b>Application Number</b> 10/725,488	<b>Filing Date</b> December 3, 2003
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		<b>Examiner Name</b> Robert S. Landsman	
		<b>Attorney Docket Number</b> 67824.407427	
<b>Sheet</b>	2 of 4		

### FOREIGN PATENT DOCUMENTS

*Examiner Initial	Cite No.	FOREIGN PATENT DOCUMENT		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	TRANSLATION	
		Country Code	Number-Kind Code (if known)				YES	NO
	14.	WO	00/06593	02-10-2000	Zuker, et al.		<input type="checkbox"/>	<input type="checkbox"/>
	15.	WO	02/064631 A2	08-22-2002	Adler, et al.		<input type="checkbox"/>	<input type="checkbox"/>
	16.	WO	01/83749	11-08-2001	Bachmanov, et al.		<input type="checkbox"/>	<input type="checkbox"/>
	17.	WO	03/025137	03-27-2002	Liao, et al.		<input type="checkbox"/>	<input type="checkbox"/>
	18.	WO	01/66563 A2	09-13-2001	Adler, et al.		<input type="checkbox"/>	<input type="checkbox"/>
	19.	WO	03/001876 A2	01-09-2003	Adler, et al.		<input type="checkbox"/>	<input type="checkbox"/>
	20.	WO	2005/015158 A2	02-17-2005	Li, et al.		<input type="checkbox"/>	<input type="checkbox"/>
	21.	WO	00/06592	02-10-2000	Zuker		<input type="checkbox"/>	<input type="checkbox"/>
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**OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS**

*Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	TRANSLATION	
			YES	NO
	22.	Johnson, et al., "The Effect of the Sweetness Inhibitor 2(-4-methoxyphenoxy) Propanoic Acid (Sodium Salt) (Na-PMP) on the Taste of bitter-sweet Stimuli", Chemical Senses, Vol. 19, No.4, pg. 349-358, 1994.	<input type="checkbox"/>	<input type="checkbox"/>
	23.	Montmayeur, et al., "A Candidate Taste Receptor Gene near a sweet taste locus", Nature Neuroscience, Vol. 4, No.5, pg. 492-498, May 2001.	<input type="checkbox"/>	<input type="checkbox"/>
	24.	Max, et al., "Tas1r3 encoding a new candidate taste receptor, is allelic to the sweet responsiveness locus Sac", Nature Genetics, Vol. 28, pg. 58-63, May 2001.	<input type="checkbox"/>	<input type="checkbox"/>
	25.	Sainz, et al., "Identification of a Novel Member of the T1R family of putative taste receptors", Journal of Neurochemistry, Vol. 77, pg. 896-903, 2001.	<input type="checkbox"/>	<input type="checkbox"/>
	26.	Kitagawa, et al., "Molecular Genetic Identification of a Candidate Receptor Gene for Sweet Taste", Biochemical and Biophysical Research Communications, Vol. 283, pg. 236-242, 2001.	<input type="checkbox"/>	<input type="checkbox"/>
	27.	Xiadong Li, et al., "Human Receptors for Sweet and umami taste", Proceeding of the National Academy of Science, Vol. 99, No. 7, pg. 4692-4696, April 2, 2002.	<input type="checkbox"/>	<input type="checkbox"/>
	28.	Database EMBL 'Online!', embi heidelberg; Acc#: Ac062024, June 21, 2000.	<input type="checkbox"/>	<input type="checkbox"/>
	29.	E. Adler, et al., "A Novel Family of Mammalian Taste Receptors", Cell, Vol. 100, No. 6, pg. 693-702, March 17, 2000.	<input type="checkbox"/>	<input type="checkbox"/>
	30.	Guo, et al., "Protein Tolerance to Random Amino Acid change", PNAS, Vol. 101, No. 25, pg. 9205-9210, June 22, 2004.	<input type="checkbox"/>	<input type="checkbox"/>
	31.	Nelson, et al., "Mammalian Sweet Taste Receptors", Cell, Vol. 106, pg. 381-390, August 10, 2001.	<input type="checkbox"/>	<input type="checkbox"/>
	32.	Nelson, et al., "An Amino-acid Taste Receptor", Nature, Vol. 416, pg. 199-202, March 14, 2002.	<input type="checkbox"/>	<input type="checkbox"/>

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			YES	NO
	33.	Alexander, et al., "Altering the Antigenicity of proteins", Proc. Natl. Acad. Sci. USA, Vol. 89, pg. 3352-3356, April 1992.	<input type="checkbox"/>	<input type="checkbox"/>
	34.	Bowie, et al., "Deciphering the Message in Protein Sequences: Tolerance to Amino Acid Substitutions", Science, Vol. 247, pg. 13061310, March 16, 1990.	<input type="checkbox"/>	<input type="checkbox"/>
	35.	Krautwurst, et al., "Identification of Ligands for Olfactory Receptors by Functional Expression of a Receptor Library", Cell, Vol. 95, pg. 917-926, December 23, 1998.	<input type="checkbox"/>	<input type="checkbox"/>
	36.	GenBank Accession Number AL139287, clone RP5-89003, February 13, 2000.	<input type="checkbox"/>	<input type="checkbox"/>
	37.	GenBank Accession Number AA907022, May 19, 1998.	<input type="checkbox"/>	<input type="checkbox"/>
	38.	Hoon, et al., "Putative Mammalian Taste Receptors: A Class of Taste-Specific GPCRs with Distinct Topographic Selectivity", Cell, Vol. 96, pg. 541-551, February 19, 1999.	<input type="checkbox"/>	<input type="checkbox"/>
	39.	Lindemann, "A Taste for Umami", Nature Neuroscience, ol. 3, No. 2, pg. 99-100, February 2000.	<input type="checkbox"/>	<input type="checkbox"/>
	40.	Perruccio, et al., "Possible Role for gustducin in Taste Transduction in Hirudo Medicinalis", Society for Neuroscience Abstracts, Vol. 26, No. 1-2, Abstract No. 66.15, 2000.	<input type="checkbox"/>	<input type="checkbox"/>
	41.	Wolfgang Bönigk, et al., "The Native Rat Olfactory Cyclic Nucleotide-Gated Channel is Composed of Three Distinct Subunits", The Journal of Neuroscience, Vol. 19, No. 136, pg. 5332-5347, July 1, 1999.	<input type="checkbox"/>	<input type="checkbox"/>
	42.	Sue C. Kinnamon and Thomas A. Cummings, "Chemosensory Transduction Mechanisms in Taste", Annu. Rev. Physiol., Vol. 54, pg. 715-731, 1992.	<input type="checkbox"/>	<input type="checkbox"/>
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